

Senior IT Manager's Meeting 10/24/02

Attendance

Bob Kohler, Peter Mandics, Kevin Kelleher, David Finelli, Jeremy Warren, Rich Beeler, Jerry Janssen, John Sheldon, Tom Defoor, Nancy Huang, Sandy Wine, Joan Brundage, Nancy Soreide, Kirk Thoning, John Parker, John Fenton, Don Mock, Kelly Pendergrass, Allison Soussi-Tanani, Rick Artz, Warren Keenan

Guest: Carl Staton (NOAA CIO), Mary Langlais (OAR CFO), Barry West (NWS CIO), Sarah Maloney (OFA CIO), Will Brimberry (GSA), Doug Hubbard (AIE)

Location: Silver Spring Hilton, MD

Decisions

None

New Action Items

Jeremy Warren – Post link to the OAR System Admin Training Policy (including Tom Pike Letter)

Jeremy Warren – Post link to the PRT on the Senior IT Manager Site

Jeremy Warren – Send out Digital Signature to Senior IT Managers and post on site

Jeremy Warren – Send out new Waiver format

Nancy Huang – Get final status of A76

Rich Beeler – Send the 18-month migration plan to Barry West

Review of Old Action Items

Sandy Wine – Provide a link to the specific law on OMB taking money for IT security. - **Done**

Nancy Huang – Send out DOC Internet Use policy on links to personal websites - **Done**

Nancy Soreide – Send NESDIS geo tiff image format info to Sandy Wine and the spec's out to the Senior IT Managers

Sandy Wine – Will look into the image format further and put together a policy on it (one page fact sheet) – **Will follow up with a policy**

ALL – Send Password waiver forms to Jeremy by September 27th

Jeremy Warren – Send out link to the TCCR site where Security Subcommittee notes are posted - **Done**

Jeremy Warren – Send out user guidance on what to forward to abuse@noaa.gov - **Done**

Meeting Minutes

Opening Remarks from NOAA CIO (Carl Staton)

- Carl would like to clarify what our expectations are
- Still working on the NOAA level reorganization of the CIO's office
- 31 people in the OCIO in four different offices (Security, telcom, planning, and HPCC)
- NOAA's Priorities
 - IT Security
 - Federal government priority
 - Wants IT Security integrated as a cost of doing business
 - Continuing process
 - Telecommunications
 - Jerry is putting together a baseline diagram of NOAA's communications (diagram from hell)
 - Does not have the expectation that we will all be on one network, but there are opportunities to improve
 - Opportunity to save money
 - Next step is to place the diagram over a geographic map and analyze it for redundancies (i.e. multiple lines from point A to point B)
 - Boulder networking model is a good one that should be applied in other settings
 - HPCC
 - Carl managing it as part of the PRT matrix management (the Admiral is really pushing the concept)
 - OCIO is already a cross cutting
 - E-Government Initiatives
 - Mark Forman at OMB is "Lord E-gov"
 - Mark Forman has very high expectations of agencies to participate in e-gov
 - Believes they will save the government a lot of money
 - He is on the war-path to get agencies to do it
 - Each initiative has a lead agency (DOC is the lead for one of the 24 initiatives)
 - NOAA is heavily involved in e-grants (major point for the Admiral)
 - Are expected to utilize the efforts on other initiatives (i.e. the Geo-spatial information one stop)
 - Any geo-spatial data will be expected to conform to standards
 - We will need to tailor our data to meet these needs (NESDIS is already doing it to some extent)
 - We need to look at it from a NOAA wide perspective

- OMB and FIMA expected NWS to contribute \$1.6 million to the e-disasters (for disaster assistance and crisis response) initiative without any explanation of how the money is being used
 - Can contribute with money or “in-kind” services to other agencies
- Other things going on in the OCIO
 - Developing a Directives system based on the NWS model for communication of policies
 - Not to issue NAO’s unless absolutely necessary (NAO’s require a lot of effort that may not always be necessary for IT policies)
 - Password Policy – All NOAA comments went to the DOC and they were ignored by the Department (they don’t usually do this with our feedback)
 - Carl will filter waiver requests and attach a memo to the DOC to show where they could have made changes to the policy to decrease the waiver requests
 - Moving to new standards for NOAA
 - May not meet 100% of needs, may only meet 80% of needs, NOAA will make a determination to go through with it anyway
 - Need to take into account future requirements
 - Exhibit 300B
 - Increased from 5 to 35 pages of questions
 - We are going to be expected to do more and more of our IT with that (including infrastructure)
 - Currently documenting less than 50% of IT dollars in NOAA
 - OMB’s expectation is that all agencies will document at least 60% of IT expenditures (and it will be increasing)
 - Will be developing a NOAA OCIO 300 for the MOC and the NOC and the CIRT
 - OMB is going over the 300B with a fine tooth comb
 - They made extensive revisions to it this last year
 - NESDIS is trying to use the 300B for all the capital asset activities and using it to replace other documentation
 - OMB is using it to assess duplication
 - The OCIO is a NOAA staff office and they have to look at things from a NOAA-wide perspective
 - Will be redoing the 2000 HPCC study
 - Will collect and expand requirements to include “all” of NOAA
 - Will then prioritize requirements
 - Wants different people to set the priorities this time
 - Use the process that is in place for other parts of the organization

- Have the Research Council take ownership of the priorities
 - David Rogers is the Chair of the Research Council
 - Would need to give them justifications for each of the priorities and let them decide
 - Once priorities are set then we need to develop NOAA wide solutions to these problems
 - This is how he's looking at IT security, networking, and policy
 - Will need to set a reasonable boundary for how far we should go (can't tackle everything)
 - Not necessarily looking at things exclusively from the NOAA perspective
 - Not know yet exactly how this will relate to multi-agency external efforts
 - Mike Crison with NESDIS, was assigned a PRT item to come up with a requirements model for everything based on the DOD process
- Super Computing
 - Believes that the level of investment in supercomputing will remain the same in NOAA
 - Will 2/3's of NOAA's supercomputing continue to reside in OAR?
 - Applications in place today become part of the requirements process
 - The research council will probably make high level observations on requirements
 - Resources should be available in the future, but they may be different resources
 - Carl's vision is a virtual super computer in NOAA
 - You submit your process, it runs somewhere and you get it back (you don't know where it runs and it doesn't matter)
 - Probably won't happen in Carl's time here
 - But it's a goal
- IT Security Policy
 - What will actually ensure security?
 - A risk assessment needs to be taken into account to find out what policies will make a difference
 - Would like to have equivalent security in areas where common solutions don't apply
- CIO Budget
 - FY '03 Security initiative doesn't look good
 - Will continue to put for IT Security initiatives

- IDS for Boulder
 - NOC for Seattle
 - Smartcards have been discussed, but nothing actually being looked at for implementation
- Architecture
 - The investment has been worth it because
 - It is a buzz word floating around OMB
 - Following our architecture builds our credibility
 - Ira Grossman has done a very good job and is working with at the federal level to help with the effort
 - Going to be key in HPC
 - The CIOs have agreed to support an architecture development tool
 - Rob Mairs worked with them to get plug-ins to meet their specific needs
 - Will be applicable at the Strategic Planning level
 - Will allow us to tie things together and make sure we're not off in left field when we do things
- Duplication
 - OMB is pushing very hard to reduce duplication
 - They want to see the processes in place to prevent duplication within the DOC
 - The CIOs will be expected to be able to look the department in the face and tell them there are processes in place to prevent duplication and that they are working
 - OMB looking at specific areas
 - Web services
 - Networking
 - Programmatic activities (particularly in NWS)
 - Expect to save more than the 30 people and \$54 million that it will cost
 - Effort to use in house expertise
 - Services provided by existing personnel
 - CIOs will need to eliminate the duplication they find
- Program Reviews
 - Evaluation of programs to ensure that they are producing enough to continue to exist
 - Will be starting internal reviews this year
 - Will need to show they are meeting their performance measures
- Consolidation
 - Rich – There is a trend to consolidate
 - Rich – No one has taking a look at what has been consolidated to see if it has actually turned out better

- Rich – Need to examine if money has been saved and if not why (if so how much)
- Carl – Consolidation is the model for rolling out new needs
- Carl – This process is supposed to be demonstrated in the control review
- Carl – We will be doing the same in NOAA, it needs to be done, it hasn't been done in NOAA
- Don – Stifles innovation and doesn't meet external needs as well
- Carl – OMB hasn't drawn the line on where they are going to consider duplications
- Nancy S. – Not necessarily consolidation in one place (could be geographically dispersed)
- Anything else that you have, please go through Nancy
 - Does want to get feedback
 - CIO Staff should “follow up, follow through, and close out” on all activities
 - When people from the OCIO are working with us they are representing Carl personally and he wants feedback if there are any problems
 - Let Nancy know if there are expectations of Carl's office that are not being met

NWS CIO (Barry West)

- Came up through the ranks in the private industry as a programmer
- Has a degree in meteorology
- Worked for Census with their research group
- Went to work for GSA to get some policy experience (worked with OMB and Mark Forman)
- Really wanted to be the CIO of NWS
- Important issues for NWS
 - Enterprise Architecture
 - Should be a program instead of a plan
 - Tool called “Metis” – blue print of your IT infrastructure
 - Very user friendly
 - Includes documentation and dependencies
 - NOAA tool will go to NWS & NESDIS then to other LOs
 - Will be accessible from the field
 - Cost about \$50k for census startup
 - Barry has no idea what’s out at his field offices
 - Need to rein in the inventory
 - But still allow them to do what they need to do
 - This is an asset that would help people with their jobs
 - Web Farms
 - Trying to get a standard for web architecture
 - Very hard to get buy-in from the field sites
 - Trying to understand their requirements and current systems
 - Creating working groups within the organization
 - Try to get ownership of the web farm groups in NWS regions
 - Working toward redundancy between the web farms in each region
 - IT Security
 - Very important topic (especially post-9/11)
 - New security officer from NSA – Bill Martin
 - Tie in with Architecture – reoccurring program
 - Trying to do audits by HQ on 1/3 of all sites each year
 - Homeland security involvement (COOP plans, etc)
 - Building a backup gateway at a site down in Virginia (completion in FY '04)
 - Meets the 50 mile requirements
 - Burrowed under the mountain
 - Very secure
 - Standards
 - Linux versions
 - NT after version 4.0 is gone
 - Still have some Mac users
 - Need to have structure, but still allow flexibility for people to get their stuff done – “it’s a balance”

- Office Automation problem across NOAA
 - Barry thinks Word Perfect needs to be phased out
 - Won't happen immediately
 - Rich will share his 18 month plan with him
 - Requirements
 - Need to be clearer about what the requirements are
 - NWS NET
 - Intranet in NWS
 - Not very sophisticated, but it's something
 - Communication without using the Internet connections
 - NATT Meeting
 - Plans to be active with the NATT
 - Will try to get more CIO participation in the group
 - Want to take advantage of Internet 2 connectivity
 - Need to plan out future usage
 - E-Gov Initiatives
 - Worked on e-gov before
 - Limited participation to a few specific initiatives (Recreational One-stop and Disaster assistance and crisis response)
 - Budgeting
 - Need business plans to sell the projects
 - 300B's are going to be more important
- Would like to go out to Boulder some time
 - Perhaps at the Web Shop next year
- Rich would like to see more of the standards within the weather service so that researchers have a better idea of what requirements they need to meet for operations
 - Starts with Nancy and Barry communication

OAR CFO (Mary Langlais)

- The virtual organization works really well for OAR, best way to capitalize on our diverse expertise in the field
- Lots of opportunities for cross-LO collaboration
- The better we can define our requirements and our science the better will be able to meet the new budget process that the Admiral is putting in place for FY '05
 - A new NOAA Strategic Plan will be out at the end of October.
- The NOAA Executive Council (NEC) will set priorities on topical areas and come up with funding scheme for these areas
- The budget process is similar to a DOD process – very rigorous
- Conceptual paper on Requirements, Planning, Programming, Budgeting
- There will be a decision point on what will go forward
- Program Analysis and Evaluation process after the Conceptual document is approved
- A new office setup in the NOAA budget office for these purpose
- The Admiral wants an in-depth review of the entire NOAA base budget
- He wants to understand what we're spending money on and then determining what to cut out so NOAA has money for other things
- It has been proposed to have a cross cutting team do the review
- Continuing Resolution until December 22nd, still no idea if we will get our budget then or if we will have to wait until march (can't spend more than our FY '02 amount)
- On the FY '03 budget there is a mark for OAR and some things were moved to NWS, restrictions base on object class
 - Some of the restrictions on object class have been removed for OAR (the restrictions didn't fit for OAR at all)
 - OAR did not get any increases for cost of living, are trying to get it reinstated
 - The Energy initiative was the item moved to NWS, but David Rogers is in discussions with NWS
- Mary strongly recommends we review the PRT recommendations
- The Admiral said to the Boulder Lab Directors in a meeting last week that OAR would NOT be broken up and placed into the other LO's
- OAR AA vacancy announcement hit the streets yesterday, it is widely advertised
- Filling an AA position usually takes about 6 months
- Mary leaving on November 18th, 2002

OFA CIO (Sarah Maloney)

- Working as the OFA CIO for the last year
- Started as a budget analyst, worked in DOC and Navy
- OFA Admin services – Financial Systems, Procurement, Grants, and Human Resources
- OFA is about 1200 people
- OFA CIO and NOAA CIO use to be the same person, now they are separate
- OFA management realizes now that they need to invest in IT to be successful
- Projects
 - OFA Website
 - Public Site
 - NOAA Employees Only site
 - Trying to put everything on the corporate index on that site
 - Includes OFA Weekly reports
 - Standardizing websites somewhat
 - IA database
 - Possible use in OAR as a tracking system
 - Demo for CIO office to track documents for 515 requests
 - Want to have a standard product for NOAA
 - Infrastructure Assessment
 - Hired a contractor to tell them what they have
 - No license tracking
 - MS Licensing for desktops and servers (deployment plan)
 - Lots of OFA's equipment will not support MS Office
 - Not comfortable with current systems capability to deploy new applications on
 - Most of the office runs on Windows 95 desktops
 - Software deployment problems
 - Drafting a contract for an assessment of ITC
 - Setting software standards in OFA (MS Word, etc)
 - Personnel Issues
 - Lots of the people in Sarah's office have been acting for many years
 - Positions have not been backfilled properly
 - Grants On-line
 - Received \$700k to assess NOAA's requirements
 - Vice Admiral and e-gov really driving this project
 - Planned to be on-line by next October
 - Currently paying \$100k for use of tools
 - An initial release due in January
 - Files in XML and Oracle database
 - Goal is to have one point in Government to do grants
 - CAMS
 - ITC supports hardware and technical support for CAMS
 - Backup systems are supported elsewhere

- Finance runs everything else (programmers and systems)
 - It's in OFA, but it's not managed by the OFA CIO
- Table of Organization
 - Pulls from the HR database & the financial database
 - Developed by RG2 contractor
 - Should show all vacancies and positions NOAA wide
 - Admiral wants this information to be available widely around NOAA
 - All web based
 - Will generate the Org. charts
 - Need to setup interoperation with the CAMS system eventually
 - Financial labor projections will be in it
- T&A
 - Web T&A being developed
 - Security concerns about the system
 - Planned for a Spring deployment
 - Diversity of schedules may be a problem
 - Would be by the individual, but may not eliminate the need for time keepers
 - Voluntary leave bank program – pilot in January
- Website
 - Needs a lot more stuff on it
 - Instructions for access
 - Information on these projects
- WebCIMS controlled correspondence system
 - Will be deployed in each LO front office
 - LO's can choose to roll it out further
- Monument System
 - Developed by RG2 Contractor for the Department of States
 - Financial system for congressional budget
 - Will translate document into budget format
 - Has a module for each part of the budget process
- ITC
 - Contract for support expires on March 31st
 - Want to have a performance based competition and we should submit our requirements for support to OFA
 - Sarah will be sending something out
 - May want to alter the contract to include both the personnel and the hardware
 - NOAA procurement doesn't have a lot of experience with performance based contracts
 - May or may not use COMMITTS (depends on the limits of the system)
 - Contract runs at about \$2.5 million a year over five years

STAR Training Program (Will Brimberry)

- GSA
- Federal program sponsored by federal CIO with support from OMB
- <Handout on Strategic & Tactical Advocates for Results (STAR) Program>
- 7 day, 65 hour course
- Next scheduled class is in Nov. in King of Prussia, PA. Then in June in Grand Canyon, AZ
- STAR program
 - Leadership
 - Myers-Briggs assessment
 - Definition of responsibilities
 - Course is for CFO's, CEO's, and CIO's
 - Program and Project Management
 - Standards based
 - Teach to the absolute authority
 - Security (of the technical system) and Survivability (of the business)
 - Risk Analysis
 - Capital Planning
 - Training by CERT and SEI
 - Technology and E-Government
 - META Group training
 - Capital Planning and Investment
 - Have OMB assistance in training (Bill Mcvey from OMB)
 - OMB understands that this course has an immediate return on investment
 - Looking for instant return on investment – work on an actual 300 in the class, with a scoring on it at the end of the class
- Will.Brimberry@GSA.gov
- <http://www.star.gsa.gov>

TCCR Sub-Committee Report on IT Security (John Parker & Dave Finelli)

- Members
 - John Hernandez (Boulder NOC) – Chair
 - John Parker (FSL)
 - Ron Bewtra (GFDL)
 - David Finelli (SEC)
 - Mike Knezivich (PMEL)
- Draft Best Practices for Web Server security
 - Analyzed the past incidents
 - This is a specific solution to the problems that were identified in the data
- Recommendation for a web expert hire as a resource
 - Focus on Security
 - Also a Program Analyst
- Incident Reporting method included in groups task
 - Should address standard reporting next
 - Standards for IDS recording
 - Establish a OAR standard (NOAA standard eventually)
- Nancy S. wants a severity index as part of the report
 - There's a perception problem with website hacks
- Our priority should be to make actual security improvements (Nancy H.)
- Nancy S. would like to have internal auditing for their web sites (especially test CGI scripts), worried about the application security
- Jerry – We need people more than any other resource
 - Support for this at the NOAA level in the security office (CIRT satellite office for Boulder with IDS)
- TCCR sub-committee should reconvene and pick up these issues
- Architecture problem (Tom Defoor)
 - We should plan our servers and networks for security
 - PMEL and CMDL on the path to reducing the number of web servers at your site

Performance Measures of IT (Doug Hubbard)

- <Applied Information Economics Power Point Presentation>
- Measurement – An observation used to reduce uncertainty
- AIE definition: Analytical methodology applies proven practical scientific & mathematical methods to the IT decision process
- AIE methodology uses cost-benefit-analysis method that calculates the value of information for each variable in the formula
- AIE Benefits: For the Frugal
 - Measuring risk results in avoidance of investments which are likely to fail
 - Measuring risk allows managing risk and increased chance of success
 - Measuring all “intangibles” benefits helps find methods to maximize benefits
 - Measurement of risk and all “intangibles” allows optimum prioritization of multiple proposed investments
 - Average payback on AIE analysis is well over 20 times
 - Used by financial analysts
- AIE Methods impact 4 critical components of the decision-making process
- Have to have a choice that could be made differently as a result of the measurements
- Building Blocks
 - Fundamental part is the measurement of risk & return on IT projects
 - Risk & Return Analysis process (via excel spreadsheet)
- Estimation on how much analysis is needed
 - Requires a little bit of analysis to determine if you need more
 - Only apply analysis where it is economically justified
 - Based on a history of implementing new technologies
- Classification Examples
 - Conditional analysis
 - Safe risks for known investments
 - Data strategy
- Has never found an actual “intangible” – EVERYTHING is measurable
- Intangibles (article in CIO magazine, “Everything is measurable”)
 - Employee Empowerment
 - Less Management overhead
 - Certain decisions are more accurate and faster
 - Information Availability
 - Time and cost of searching is reduced
 - Certain costly errors are less frequent
 - Customer Relationship
 - Increased repeat business
- Measuring computer hacks that aren’t reported is the same as how census measures the people that aren’t counted in the census
 - Sampling methodology like catch and release
 - It’s an empirical study so it needs to be documented very closely

- Need to model the current state of uncertainty
- Probability distributions (ranges) are a better measure than a single point
- Try a Google search on Calibration of Uncertainties
- Measuring your uncertainty is possible so you can be trained to identify your own precision in measuring uncertainty
- Generally people are “overconfident” on our uncertainty estimates (90% confidence is usually around 75% confident)
- If you don’t train your people to assess their risk then they’re estimates will always be too low
- Economic Value of Information – Decision Theory Formula
 - Information reduces uncertainty
 - Reduced uncertainty improves decisions
 - Improved decisions satisfy business objectives (by definition)
- For Example: Measuring cost verse risk reduction tells you how much you value your own life (i.e. buying an air bag for \$500 more to reduce your risk of getting into a fatal car accident). Generally between \$2 million and \$20 million.
- Some variables are over looked in the decision models
 - Chance of cancellation of a project – Duration (in months) times 1.2% (after 24 months increase multiplier by .5%)
 - Adoption rate (when usage starts how quickly does it grow)
 - These items that we don’t typically measure tend to matter more than the ones that we do measure
- Logarithmic curve for measuring number of risk verse accuracy (i.e. measuring everything isn’t much of an advantage over measuring the few biggest things)
- Plotting Risk and Return
 - Logarithmic relationship between the chance of a negative IRR and expected IRR over 5 years
- You should always have more ideas than you have money
 - And reject all the bad ideas and accept all the good ones
 - You want lots of choices
- Risk Mitigation strategies, if you know your biggest risks they’re easier to mitigate
- Performance Metrics can be chosen based on the best risks
- Risk/Return Analysis (RRA) Process
 - Classification => Intangibles => Measurable => Calculate Risk/Return Position => Value of Information
 - Measuring “embarrassment” from Website hack
 - Ask what do you mean by that, why do you care?
 - Ask who’s job is it to measure embarrassment (who’s measured this before)?
 - Embarrassment => Loss of Credibility => Decrease of visitors to the site and working longer hours to regain credibility by implementing more security (both are measurable)

- Could also equate Embarrassment to the likelihood of you losing your job
 - Public Affairs people make a job out of measuring embarrassment
 - Should express the metric in many different ways – lots of Performance Measures
 - For example: The total economic consequences of a web hack (\$ cost of intrusions) expressed as a range of possible values not just as an absolute number.
- More advanced methods of AIE
 - Large combinations of multiple alternatives
 - For example, consolidating 13 different sites (lots of combinations)
 - There may be more than one right answer, but there are a much larger number of wrong answers
- Implementation Project
 - Train in house people to continue after a project ramp up
 - Work in house as needed
 - Contract for specific products (i.e. all the hard parts of the 300B's for two major systems over a 5 week time frame)
- Cost is roughly \$100k for a couple million dollar system
 - Not worth it for small systems
 - More cost effective to do it once and train people through the process so it can be done in house the next time
- IT is a large part of his business, but not all of it
- Calibration trick (for calibrating people)
 - I'll give you a thousand dollars if X is true or I'll spin a dial that gives you a 90% chance of winning – which do you want to do?
 - If you pick your X then you're more than 90% sure it's true, if you picked the dial then you aren't really 90% confident
 - In the example X was a gallon of water weighing 8.45 lbs.
- Cost-Benefit Alignment – what is the bucket of money suppose to do?
- Why IT is of value – Three things IT is supposed to do for the mission:
 - Reduce the cost of a process
 - Speed up the process
 - Increase the accuracy of the process (decrease error in the process)
- Problem of performance measures that depend on a threshold or milestone
 - For example, you research for 5 years with no perceptible gain and then at the end of the project there are massive benefits to a particular process
 - When it's reported each quarter then it looks like your only productive for one quarter out of a five year period
 - Solutions:

- Can try to justify on forecast results of benefits you can measure; expected benefits would change over time and increase as you get closer to the goal
 - Can show uncertainty reduction along the way
 - Measure percentage of completion toward future benefits
 - Threshold economics of large scale products being more useful in the long run (economy of scale)
- Three articles in CIO Magazine that cover the conceptual foundation
 - “Everything is measurable”
 - “Hurdling Risk”
 - “IT measurement inversion”
- Amount of time involved for an assessment is one to two months based on the cost of the investment
- Federal government should work out reserves for funding based on the amount of risk (they don’t so we end up fudging it into the budgets)

Digital Signatures (Jeremy)

- See handout

Netscape Version (Jeremy)

- Netscape Version 4.79 is the standard for e-mail client
- You can use whatever you want for the browser (i.e. Netscape 6 or 7)
- MCB is coming up with a new standard
- What do OAR want as a new standard?
 - IMAP4 protocol only
 - Anything else? Send to Jeremy

Password Policy (Jeremy)

- Need a waiver if you can't technically or manually enforce the policy
- Waivers are being put into a new format
- They will go to Carl and then to the DOC Security Officer
- Send additional waivers to Jeremy

Wrap-up (Nancy H.)

- Is the virtual organization more work?
 - Maybe
 - It allows labs to have more influence
 - Less overhead at HQ is better
- Are there areas we can cooperate and consolidate on
 - GFDL and FSL doing 300's
 - Maybe have one person at HQ take the training with Doug Hubburd and apply the knowledge to the labs
 - Make a general CBA for all of the systems
 - TCCR Security Sub-group
- <Inspirational Video>